



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

them to those of your colleagues who intend to visit the Universal Exhibition. Will you kindly inscribe their names on the cards, which are not transferable. If the number which I send you does not appear to be enough, be so good as to inform me, and tell me how many you wish. Will you also give notice to your colleagues that all Members of the Anthropological Society of London, can, on arriving at Paris, obtain a ticket from me every Tuesday, Thursday, and Saturday, from noon to half-past, rue des Saints-Pères, 1.

“Receive, etc.,

“(Signed)

“P. BROCA, *Secrétaire-général*.”

Dr. HUNT said, in continuation, that he had received the tickets and should place them in the hands of Mr. Blake to be distributed to those who intended to attend the Paris Exhibition. Any gentleman would do well to see the exhibition organised by Dr. Broca, for he believed it was the most wonderful of the kind ever shown to the public. He proposed the thanks of the Society to Dr. Broca for his kindness and liberality in sending the tickets.

Mr. MACKENZIE seconded the motion, and observed that Dr. Broca had always shown himself to be a true, enlightened, and kindly-meaning anthropologist, and he could not speak too highly of his great merits. He was one of the most illustrious ornaments of the science of anthropology.

The vote of thanks was carried unanimously.

Dr. HUNT then announced that the Council had that day appointed Dr. Mouat as Corresponding Secretary of the Society for India, where he is at present, and he had promised to do all he could in aid of their objects. He had been appointed Inspector-General of prisons in India, in which capacity he would have the opportunity of acquiring much valuable information. He (Dr. Hunt) congratulated the Society on having so able and well qualified a man to act as their Secretary in that part of the world.

The following paper, contributed by Mr. Westropp, was then read.

On the Sequence of the Phases of Civilisation, and Contemporaneous Implements. By HODDER M. WESTROPP, Esq., F.A.S.L.

It is familiar knowledge to us that man, in his progress through life, passes through the stages of infancy, childhood, youth, manhood. There is evidence that man in the aggregate passes through an analogous sequence in the stages of his development—the primitive barbarous, the hunting, pastoral, and agricultural. The last alone may be termed historic, the other stages are prehistoric. In the early history of nations, we find evidences of an agricultural phase. In India, the Aryans were an agricultural race; their very name signifies “one who ploughs or tills”. The Pelasgi, the earliest historic race in Greece, were an agricultural people. The Latin words which are expressive of the events of an agricultural life, such as *aratrum*, *bos*, *ager*, can only be ascribed to the Pelasgian colonisers of Italy. Tacitus also describes the ancient Germans as agricultural nomads. The late wonderful discoveries in archæology have opened up distinct vistas of the earliest prehistoric times, the pastoral, the hunting, the earliest and barbarous stages of separate races.

It appears as if there were but one history for every separate people, each passing through these successive phases.

Of the sequence of these stages, and of the various implements, weapons, contemporaneous and coincident with each phase, I shall now adduce a few proofs. In the first place, it must be admitted that the existence of these phases of civilisation in each separate race is undoubted, for all that has growth and progress advances by stages of development to a culminating point; and, as it is impossible that they could be contemporaneous among the same people, they must have been successive and in sequence, each phase ascending in progress from a ruder stage to a higher and more advanced one; analogous to the growth of the individual man, who cannot be an infant, a youth, and a man at the same time, for these stages of his development are in him successive. The transition, however, from one phase to another was neither marked nor sudden, but a slow and gradual operation. There was thus an intermediate period, partaking of the lower and higher stages, and a blending of the two.

This law of sequence is evidently a prevailing law, not only in man, but in nature. Mr. Page thus expresses himself with regard to its observance in geology:—"The geological record is a thing of mere sequence—an inconceivable amount of unexpressed time, during which certain events follow each other in definite order." The rise, progress, and maturity of the arts of architecture, sculpture, painting, are also nothing more than the sequence of styles from the lowest to the highest.

In France, England, Italy, Sicily, Palestine, India, evidences have been discovered of an early primitive barbarous phase, when man was contemporaneous with the mammoth and the woolly-haired rhinoceros, and used those large, rude, flint implements, found in conjunction with the remains of those animals. The implements and weapons thus found prove the man of that period to have been a savage of the lowest grade, unacquainted with the use of pottery, and even ignorant of the art of polishing or ornamenting the splinters of bone, or the rough flint that he used. Sir John Lubbock thus concludes on the evidence before him:—"We may regard it as well established, that the mammoth and woolly-haired rhinoceros co-existed with the savages who used the rude 'drift hatchets', at the time when the gravels of the Somme were being deposited."

Of the hunting stage of man's development, or that phase when flint arrow-heads and flint weapons were generally adopted, the North American Indians, and the weapons used by them, afford an example. They lived by the chase, depending mainly on the animal kingdom for their subsistence. They were essentially hunters and fishermen; the buffalo, the deer, and the salmon supplying them with their principal articles of food. They exhibited an extraordinary amount of skill in the manufacture of their bows, and, among several of the tribes, arrow making was a distinct profession. The arrow-heads were of obsidian, flint, and quartz. Distinct traces of this hunting stage have been discovered in France, England, Ireland, Denmark, Switzerland.

The sum of evidence from the discoveries of M. Lartet and Christy proves that man, in a hunting state, lived in the south of France on

reindeer, musk-sheep, horses, oxen, and the like. On the floors of the caves discovered by them, fragments of the bones of the red deer, the chamois, the bouquetin, and more particularly the reindeer, have been found mixed up pell mell with worked flints of different forms and sizes.

The Danish kjökkenmöddings were of this age. In these shell-mounds, rude flint implements, sling stones, fragments of bone, have been found. The primitive population of this period lived on the shore, and fed principally on shell-fish, but partly also on the proceeds of the chase. No polished axes have been yet found in these kjökkenmöddings, and a total absence of metal has been remarked.

In Ireland several hundreds of flint and chert implements, comprising arrow-heads of highly finished types, scrapers, and other articles, together with bones and a boar's tusk, have lately been found on a peninsula of Lake Bally Noe; and the inference has been drawn that red deer (their antlers are found in this lake), boars, and other wild animals, having been driven into this thickly wooded peninsula, were slain with these weapons on its shores by the ancient inhabitants, who were hunters.

In a late excavation made by Dr. F. Keller, between Friedrichshafen, on the lake of Constance, and Ulm, the following objects were found. A number of small flint knives, and other implements of silex, in conjunction with the bones of the reindeer, of bears of large size, of the wolf, the horse, and the ox, and also bones of birds, evidences of a people who lived by the chase, and used these flint implements.

Implements of polished stone bear witness to a more advanced stage of civilisation, when man, abandoning the more precarious mode of subsistence derived from the chase, learned to domesticate his prey, and reduce the wild animals around him to his rule. He thus becomes a shepherd. Leading a more settled life, he builds for himself a dwelling, and learns to form implements more suited to his wants; he improves on the former rude shapes, grinds, polishes, and sharpens the stone implements which he will require for cutting timber, and for other purposes contributing to his need. The men of this stage possessed many useful arts; they invented the use of pottery, and were not ignorant of spinning; they dwelt in huts, the bottoms of which are now known as hut-circles, sunk in the earth, or in dwellings raised on piles driven into the shallows of lakes. The tumuli of Gaul, Germany, Britain, and Scandinavia, indicate their belief in a future state, and their reverence for the dead. They ground and polished their stone implements. Universally they had pressed the dog into their service. *They were essentially pastoral*, but lived also on the produce of the chase—the urus and the red deer, as well as upon their domestic animals—the horse, pig, sheep, goat, and short-horned ox.*

Of the existence of this stage, and of the implements contempo-

* An objection has been made to this view, that "the shapes of the implements vary with the nature of the stone." This observation is, however, not founded on fact, for there is undoubted evidence that the FLINT implements of England, Ireland, France, and Belgium, vary in shape according to the stage of civilisation in which they were used. Those of the hunting stage are invariably *chipped* into shape, while those of the pastoral are *ground*, a marked peculiarity of that phase of civilisation.

aneous with it, there are proofs all over the world. Herewith I give examples of stone implements from different countries, almost identical in shape and form,* and witnesses of a similar phase of civilisation wherever found. That they were independently invented among these different peoples cannot admit of a doubt. Sir John Lubbock, a great authority on this subject, expresses his belief that the simpler implements have been independently invented by various tribes, and in very different parts of the world.

The use of metal among any race marks an important era, and argues a more advanced grade of civilisation. The introduction of more cutting instruments of metal must have led the men of that age to cut down forests, clear and till the ground, cultivate the soil, and consequently bring about a system of agriculture. The adoption of metal, however, was neither sudden nor universal at the transition from the stone age to the bronze, as we have already remarked, was slow and gradual. The earliest and simplest bronze celts were, as Sir W. Wilde remarks, "evidently formed on the type of the old stone celts." These, however, were improved on until they assumed the more advanced forms commonly termed the winged and socketed celts.

With regard to the connection of these bronze implements with the more advanced or agricultural stage, Sir John Lubbock comes to this conclusion:—"The evidence appears to show that the use of bronze weapons is characteristic of a particular phase in the history of civilisation, and one which was anterior to the discovery, or at least to the general use, of iron"; and we may add, which was subsequent to the stone age. This phase was evidently the agricultural. Mr. Worsaae thus establishes the coincidence of bronze implements with an agricultural stage in Denmark. The population becoming possessed of useful metallic implements, began to till the earth. Having extirpated the forests in the interior of the country, partly by fire, partly by the axe, the inhabitants spread themselves over the whole land, and at the same time laid the foundation for an agriculture, which, up to the present day, is one of the principal industrial resources of Denmark. In Ireland the great antiquity of corn has been generally acknowledged, and sickles of bronze have been frequently obtained there.

Among the lake dwellings of Switzerland, some have been referred to the stone age, others to the bronze, as they exhibit marked distinctions in their fauna. The fauna of the former testify to a pastoral people, the latter to an agricultural. Sir John Lubbock adduces evidence of the different phases of civilisation in the lake dwellings. Among those of the stone period, the list of objects found comprises seventeen axes, twenty whetstones, and ninety-seven arrow-heads, flint flakes, while objects of metal are altogether absent, and but one doubtful case of a corn crusher, and not a single spindle whorl; on the other, in those of the bronze period, the large number of corn crushers, and the presence of spinning weights, are significant, and the total absence of stone axes is remarkable. Bronze was used, not

* The examples given exhibit almost identical forms. Others, also, of analogous forms, can be given from Japan, Australia, America, Peru, and the South Sea Islands.

for articles of luxury only, but also for the ordinary implements of daily life. The pottery tells the same tale. There is no evidence that the potter's wheel was known to men of the stone age, and the materials of which the stone age pottery is composed are very rough, containing large grains of quartz, while that of the bronze age is more carefully prepared. The ornaments of the two periods show, also, a great contrast. "Thus, then, we see," continues Sir John Lubbock, "that the distinction between the ages of stone and bronze is by no means confined to the mere presence of metal. The manufacture of pottery, the presence of the potter's wheel, the greater variety of acquirements evidenced by the greater variety of implements, the indications of more advanced husbandry, the diminution of wild animals and the increase of tame ones—all indicate a higher civilisation for the inhabitants of Morges and Nidau (of the bronze age), than for those of Mooseedorf and Wauwyl (of the stone age)."

A remarkable discovery at Haalstat, in Austria, has brought to light a transitional period, or a passage from the bronze to the iron age, when bronze tools were slowly dying out before the use of iron. The arms of iron found at Haalstat were actually copied from their predecessors in bronze. Bronze celts faced with iron edges were also found. In the iron age we reached the strictly historical period, and a more advanced phase of civilisation.

To sum up, we may now conclude that there is evidence of a sequence of phases of civilisation, and of contemporaneous implements among each separate race. A writer in a late number of the *Saturday Review*, terminates his article in these words:—"In the scale of the former occupants of Western Europe we have, first, the flint folk of the geologist, then the reindeer folk in a hunter state, then the polished-stone-using folk (or pastoral), then the Celts, and lastly the Teutons." Sir John Lubbock, at the end of his chapter on the Swiss lake-dwellings and their inhabitants, observes:—"We have traced them through the ages of stone and bronze, down to the iron period. We have seen evidences of a gradual progress in civilisation, and improvement in the arts, an increase in the number of domestic animals, and proofs at last of the existence of an extended commerce. We found the country inhabited only by savages, and we leave it the seat of a powerful nation." But, of all countries, Denmark presents us with the most distinct evidences of a country passing through the flint, stone, bronze, and iron ages successively. England and Ireland also exhibit similar analogies in the development of these successive periods.

This sequence of phases of civilisation, it must be admitted, can be considered to exist alone among the races who have exhibited progress; among the unprogressive races, such as the Negro, the Australian, the New Zealander, a blending and sometimes a contemporaneousness of the same phases and implements is visible; nor, indeed, was it always strictly followed out among the higher races, for, as Sir John Lubbock acknowledges, "many stone implements belong to a metallic period." The presence, however, of a stone implement, wherever found, bespeaks a want of civilisation, and generally an ignorance of metals. In some remote and uncivilised parts, they have been retained even up to a late date. The South Sea Islands,

at the time of their discovery, were still in the stone age ; and an old woman was lately seen cutting cabbage with one of the ‘ Picts’ knives’ or stone hatchets of the early inhabitants of Shetland. While admitting that the sequence of these phases is not always strictly followed out, it must not be imagined that there is any uncertainty with regard to the existence of this law of sequence, the few proofs we have given amply testifying to it. It must be further kept in view, that the successive stages of civilisation are not always contemporaneous in different countries. The period in time of any particular phase, will depend entirely on the relative antiquity of the country in which these phases are evolved.

In conclusion, I may add that this view of the sequence of the phases of civilisation among separate races, and the analogy in the forms of the implements used contemporaneously with them, so far from being regarded as a wild speculation, ought more justly to be considered as tending to prove a unity in the development of man, and an analogy in the evolvment of his natural instincts and of the suggestive principle among all races ; and further, as an emphatic proof of that order which universally prevails in man and nature.

Dr. HUNT observed, with regard to the remark that an old woman was lately seen in the Shetland Islands cutting cabbages with a stone hatchet, that a similar implement was now in the Society’s museum. It was very unsafe to draw inferences from an isolated fact. The woman did not belong to the stone period, and did not know where the stone implement she used came from. It did not serve to show that the Shetland Islanders had ever used stone implements ; the reverse was, indeed, the case, for they called those stone implements found in the islands “thunderbolts,” and used them as charms. With regard to the assertion that the alleged sequence of the phases of civilisation among separate races and the analogy in the forms of the implements used contemporaneously with them, should be considered as tending to prove a unity in the development of man, Dr. Hunt remarked that it was a large question, and he did not think the author of the paper was warranted in arriving at such a conclusion by finding stone implements in use ; still less could it be considered as proof of the universal prevalence of order in man and nature.

The Rev. DUNBAR HEATH also took objection to the last sentence in the paper, that the sequence of the phases of civilisation proved a unity of development in man. By what right, he asked, did the author of the paper begin with primitive man ? If he began farther up in the scale of creation, the law would still be the same. Suppose they began with primitive man, and they found that he had used implements of stone, bronze, and iron ; but in the Belgian bone caves were found that wonderful specimen of a jaw, half man and half ape. He did not see why they should begin at any point whatever. There was no reason why they should begin at an arbitrary point, for the same law was observed in operation farther on, and even unity of development might be deduced by embracing a larger number.

Mr. FISHER said the author of the paper appeared to have put the cart before the horse in asserting that the state of pastoral life preceded

the hunting stage. Man subsisted on wild animals long before he domesticated them, and protected them in herds and flocks. It was quite transposing the natural order, to place the latter state before the former. Pastoral life was an advance upon the supposed original state of barbarism, but it might be found that the subsequent barbarism was only a lapse from that state, rather than part of a continuous sequence.

Mr. McGRIGOR ALLAN said he did not understand from the paper that Mr. Westropp had placed the pastoral stage of progress before the hunting stage. He was inclined to think that some races would never advance beyond the hunting stage. The aborigines of North America were a proof of a race that never got beyond it, for notwithstanding all the attempts that had been made to get them to till the land, they could not be considered an agricultural people. He could not agree with the author of the paper, supposing they had passed through the successive stages of civilisation, that it proved a unity in the development of man.

Mr. BLYTH considered it was not necessary for man to have passed through a pastoral stage. He instanced the Mexicans and the mound-builders of the Mississippi valley, who there was no reason to suppose ever possessed flocks. He mentioned that in Burmah stone implements had recently been discovered similar to those found in various parts of Europe.

Mr. MACKENZIE was of opinion that the progress of the civilisation of man, as indicated by the author of the paper, would require a much longer time for its development than was usually allowed. They must give a few additional millions of years to the existence of the human race for such elaborations as indicated in his transition periods. He considered that Mr. Fisher's remark, that the progress of civilisation might not have been continuous, deserved attention. There might have been times when the human race went back. There might, for instance, be waves of civilisation in which man was thrown back by some natural catastrophe. It was known, in modern times, that the human race sometimes went back to a more barbarous state, therefore a longer period must be allowed for man's existence to account for his present state of civilisation.

Mr. C. CARTER BLAKE, referring to that part of the paper in which the author supposed that the men of the polished stone period pressed the dog into their service, observed that in those Belgian bone caves, in which the remains indicated a late polished stone period, no bones of the domestic dog had been yet observed. There was, indeed, no evidence that man at that period had the slightest knowledge of the sheep, the domestic ox, the horse, or the dog. The remains of the ox found were always those of the *Bos longifrons*. The remains of sheep were never found in the polished stone period. In his opinion, the *Bos longifrons* differed essentially from the common domesticated ox of Great Britain, and he hoped that zoologists would direct their attention to the subject, and be able to adduce some positive facts as to the true distinctions between them. The wild sheep of Sardinia were very different from any sheep in England at the present time. With regard to the horse and other animals, he thought that in the

existing state of knowledge it was not possible to draw any generalisation whether man at different periods had power to domesticate the animals the bones of which were found with his remains ; but he (Mr. Blake) believed that those animals were not domesticated.

Mr. BLYTH said the domestic sheep in different countries were very different ; so much so as to indicate a plurality of specific races, one or more of which (as the ordinary long-tailed sheep of Europe) have no living wild representative. Certain diminutive short-tailed races with crescentic horns, as that still inhabiting the Shetland Islands, and perhaps the flocks of small black sheep mentioned to occur numerously in Corsica, might very well have been derived from the *Ovis musimon*, which is still found abundantly wild in Corsica and Sardinia ; but the short-tailed domestic sheep of high middle Asia, with a very different typical flexure of horn from that of the moufflon and kindred species, of which several are now recognised, are most unlikely to have descended from any wild race of that particular form of *Ovis*. In some of the larger kinds of wild sheep, as the different argali of northern Asia and America, the old rams are so large and powerful, that they might not be manageable by the shepherds ; and there are no indications that any one of these great argali have contributed to the production of domestic flocks. Of the numerous wild species of the genus, it is remarkable that there is not one that bears fleece, or shows a greater development of the woolly under-covering than occurs in various other ruminants. The fleece of most of the cultivated races of domestic sheep, in the opinion of the speaker, was due to culture and selection in breeding, by which long continued process the under-covering had been developed in excess, while the coarse hairs (which alone are visible externally in the various wild species, and still in some of the domestic races) had been more or less completely eradicated. If the domestic of different parts of the world had descended from different wild stock, some of them long-tailed and others short-tailed, with various other differences, as Mr. Blyth believed to be the case, then it followed that the fleece had been analogously developed in races of different wild origin. We were completely in the dark with respect to the extinct wild type from which the numerous European breeds with horns describing a second spiral curvature in the mature ram, and invariably born with a long tail, may be presumed to have descended ; but there was reasonable doubt that all of the various races of tame goat had descended from the Asiatic wild *Capra aegagrus*, and that we are therefore indebted to Asia for the tame goat, if not also for the prevalent type of domestic sheep in this part of the world. It is in the highest degree improbable that the long tails of the latter could have acquired their numerous additional vertebræ as the result of domestication ; and there are no corresponding long-tailed races of tame goat. With regard to cattle, he thought it would be very difficult to prove that the *Bos longifrons* was different from certain of the modern cattle of Ireland and other places. There appeared to be several primæval races of cattle intermingled.

Major OWEN suggested that the author of the paper might have conceived that the animals were created in the same state. As to the

supposition that a pastoral state existed before the hunting stage, he considered it to be impossible.

Mr. DENDY cautioned the meeting against falling into the error of drawing conclusions from isolated facts. The case already alluded to of the woman in the Shetland Islands, who was seen cutting cabbages with a stone axe, was one instance; and he considered the jaw-bone found in Belgium another. There were many cases of *lusus naturee*, of which he thought this was one. So that it was impossible from a single specimen to conclude that an animal belonged to a different species. He had seen human bones so closely approximating to those of the *Simice* that it was difficult to distinguish them. It was a case of monstrosity, and no conclusions should be drawn from such isolated facts.

Mr. FISHER thought that climate had more to do with such changes than anything else, and that the changes were made to meet the wants of man. In northern countries, for example, where wood was required for fuel, the timber was soft and adapted for burning; but in warmer, tropical climates, the timber was hard. The wool of the sheep, in like manner, was better adapted for warm clothing in colder climates than in hot countries.

The following paper was then read:—

On the Power of Rearing Children among Savage Tribes. By SAMUEL PHILLIPS DAY, Esq., M.A., F.A.S.L.

THE topic which forms the subject-matter of this paper is one of some difficulty. There are no published statistics, and little reliable information to be obtained. What there is, can be found only by wearisome research, being diffusely scattered throughout various books of travel. Possessing very scanty data, I am thrown principally upon my personal observations, and the conversations which I have held with southern planters and others, in this tentative, and I am afraid abortive, attempt to throw even a faint glimmer of light upon a subject possessing especial interest for the student of Anthropology. With the Negroes of the United States, and the British American Indians, I have frequently been brought into contact. I have studied attentively their social characteristics; and, therefore, the brief remarks I have to offer may be received with that amount of credence attached to the statements of all disinterested travellers.

The manifest difficulty of rearing children, even amongst highly civilised nations, forms one of the most distressing and perplexing social problems of the age. Consequently, we are not to be surprised that, amongst savage tribes, this difficulty should become immeasurably increased. The Negro mother, more particularly, pays little or no attention to her offspring—possibly, feels no more affection for them than a lioness does for her cubs. She is generally highly prolific, so that every plantation swarms with children. Dull, unlively, apathetic creatures, they can bear any degree of neglect or ill-usage without murmuring. I have seen infants left about in baskets, exposed to the heat of a scorching sun for a length of time; and they neither cried nor moved a limb, feeling apparently as happy as a cat crouched on the hearth-rug before a blazing fire. Were Negro children as susceptible and delicate as those of white parents, they must